

WHAT IS CLAIMED

1. A method of selectively coupling digital communication packets, that are presented to virtual circuit input ports of a packet switch, through said switch to virtual circuit output ports thereof, said  
5 method comprising the steps of:

(a) providing a plurality of packet analyzers, a respective one of which is operative to analyze contents of a packet presented thereto and to provide an output representative of whether or not said contents of said  
10 packet contains prescribed information;

(b) coupling a packet presented to a respective virtual input port of said switch to respective ones of said plurality of packet analyzers; and

(c) in response to a respective packet analyzer to  
15 which a packet is presented in step (b) supplying an output representative that the contents of the packet coupled thereto in step (b) contains said prescribed information, coupling said respective packet to a selected virtual circuit output port of said switch, but  
20 otherwise not coupling said respective packet to a virtual circuit output port of said switch.

2. The method according to claim 1, wherein step (b) comprises coupling a packet presented to a respective virtual input port of said switch to a prescribed order

of said plurality of packet analyzers, and step (c)  
5 comprises, in response to any packet analyzer of said  
prescribed order of said plurality of packet analyzers  
supplying said output representative that contents of the  
packet coupled thereto contains said prescribed  
information, coupling said respective packet to a  
10 selected virtual circuit output port of said switch, and  
terminating coupling of said packet to any remaining ones  
of said prescribed order of said plurality of packet  
analyzers.

3. The method according to claim 1, wherein step  
(c) comprises, in response to no packet analyzer having  
a configuration function for which there is an associated  
virtual circuit port of said switch, accepting the packet  
5 coupled thereto and discarding said packet.

4. The method according to claim 1, wherein  
step (a) comprises providing a prescribed order of  
first through N-1th packet analyzers having configuration  
functions for there are associated virtual circuit ports  
5 of said switch, and an Nth packet analyzer having no  
configuration functions for there is an associated  
virtual circuit port of said switch,

step (b) comprises coupling said packet presented to  
a respective virtual input port of said switch to

10    respective ones of said first through N-1th packet  
analyzers, and

          step (c) comprises, in response to any of said first  
through N-1th packet analyzers supplying an output  
representative that the contents of the packet coupled  
15    thereto in step (b) contains said prescribed information,  
coupling said respective packet to a selected virtual  
circuit output port of said switch, but in response to  
none of said first through N-1th packet analyzers  
supplying an output representative that the contents of  
20    the packet coupled thereto in step (b) contains said  
prescribed information, causing said Nth packet analyzer  
to accept and discard said packet.

5    5.    A packet switch control mechanism for  
controlling the selective coupling of digital  
communication packets presented to virtual circuit input  
ports of a packet switch to virtual circuit output ports  
5    thereof comprising:

          a plurality of packet analyzers, a respective one of  
which is operative to analyze contents of a packet  
presented thereto and to provide an output representative  
of whether or not said contents of said packet contains  
10    prescribed information; and

          a packet distribution controller coupled to said  
plurality of packet analyzers and being operative, in

response to a respective packet analyzer supplying an output representative that the contents of the packet  
15 coupled thereto contains said prescribed information, to couple said respective packet to a selected virtual circuit output port of said switch, but otherwise not coupling said respective packet to a virtual circuit output port of said switch.

6. The packet switch control mechanism according to claim 5, wherein said packet distribution controller is operative, in response to any packet analyzer of a prescribed order of said plurality of packet analyzers  
5 supplying said output representative that contents of the packet coupled thereto contains said prescribed information, to cause said respective packet to be coupled to a selected virtual circuit output port of said switch, and to terminate further coupling of said packet  
10 to any remaining ones of said prescribed order of said plurality of packet analyzers.

7. The packet switch control mechanism according to claim 5, wherein said packet distribution controller is operative, in response to no packet analyzer having a configuration function for which there is an associated  
5 virtual circuit port of said switch, to causes said packet to be accepted and discarding.

8. The packet switch control mechanism according to claim 5, wherein said plurality of packet analyzers comprises a prescribed order of first through N-1th packet analyzers having configuration functions for there are associated virtual circuit ports of said switch, and an Nth packet analyzer having no configuration functions for there is an associated virtual circuit port of said switch, and wherein said packet distribution controller is operative, in response to any of said first through N-1th packet analyzers supplying an output representative that the contents of the packet coupled thereto contains said prescribed information, to couple said respective packet to a selected virtual circuit output port of said switch, and wherein said Nth packet analyzer is operative, in response to having said packet coupled thereto, to accept and discard said packet.